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Mazdoor Kisan Shakti Sangathan

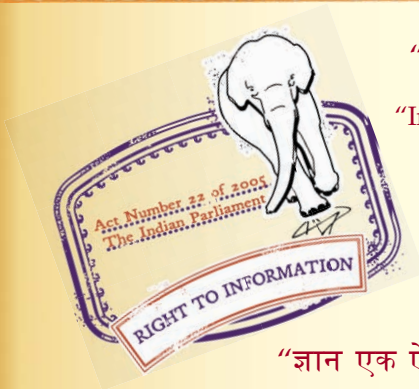
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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 4920 (1968): Glossary of terms applicable to roof coverings [CED 13: Building Construction Practices including Painting, Varnishing and Allied Finishing]



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Satyanarayan Gangaram Pitroda

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

GLOSSARY OF TERMS APPLICABLE
TO ROOF COVERINGS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

GLOSSARY OF TERMS APPLICABLE TO ROOF COVERINGS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI

Indian Standard

GLOSSARY OF TERMS APPLICABLE TO ROOF COVERINGS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 12 December 1968, after the draft finalized by the Terminology, Notations and Drawings Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 This standard has been prepared to bring about uniformity in the expression of various terms used in connection with the work of roof coverings.

0.3 In the formulation of this standard due weightage has been given also to international co-ordination among standards and practices prevailing in other countries and assistance has been drawn from the following:

B.S. 892-1964 Glossary of highway engineering terms. British Standards Institution.

B.S. 2717-1956 Glossary of terms applicable to roof coverings. British Standards Institution.

1. SCOPE

1.1 This standard deals with terms commonly used for various processes of roof coverings and are covered in seven sections.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

SECTION I GENERAL TERMS

2.1 Abutment — The inter-section of a roof surface with the part of the structure which rises above it.

2.2 Barge Board — In case of gable roof where there is no gable parapet and the roof projects beyond the gable, the barge boards are planks

running down from the edges to the eaves covering the outermost rafter.

2.3 Capillary Break — A space left between two surfaces to prevent capillary action.

2.4 Chimney Gutter — A gutter formed at the back of a chimney stack penetrating through a pitched roof.

2.5 Cleat — A piece fixed on principal rafter to secure the purlins.

2.6 Back Gutter — A gutter formed at the back of a chimney or other penetration through a pitched roof.

2.7 Dormer — A vertical window or opening framed in a sloping roof.

2.8 Dormer Cheek — A vertical side of a dormer.

2.9 Eaves — The lower edge of the inclined roof.

2.10 Eye — A circular hole in the roof.

2.11 Eyebrow — A feature formed by sweeping a roof surface up and over a window or ventilator opening and returning again to the normal plane.

2.12 Fall — The slope of a flat roof or a gutter.

2.13 Fascia — The external vertical member, of various impervious materials, of a cornice or eaves construction.

2.14 Fascia Board — A member, usually of timber, fixed to the rafter ends, wall plate or wall face immediately below the eaves.

2.15 Fillet (of Mortar) — A triangular strip of mortar applied at abutments, top edges, under verges and in similar positions to make the angle waterproof.

2.16 Finial — A decorative fitting used at the junction of ridges and hips and at the top of conical, pyramidal, or dome roofs.

2.17 Flat Roof — A roof the pitch of which is 10° or less to the horizontal.

2.18 Flashing — A strip of impervious material, usually metal, used to exclude water from the junction between a roof covering and another part of the structure.

2.18.1 Apron Flashing — A flashing the lower edge of which is lapped over the roof covering.

2.18.2 Cover Flashing — A flashing used in conjunction with other components, such as soakers, the vertical parts of which it overlaps.

2.18.3 Raking Flashing — A flashing used to cover an inclined inter-section when the top edge is secured into a chase cut parallel to the top surface of the roof covering.

2.18.4 Stepped Flashing — A flashing used to cover an inclined inter-section, its upper edge being shaped to step up from course to course of brickwork or masonry and secured into the horizontal joints.

2.19 Fleche — A small slender spire fixed to the ridge of a pitched roof.

2.20 Gable — The triangular upper part of a wall at the end of the ridge.

2.21 Gablet — A small gable.

2.22 Gambrel Roof — A roof hipped for part of its height and terminated by a gablet, also known as a half-hipped roof.

2.23 Gutter Bearer — The bearer used to support the gutters and is nailed to every rafter.

2.24 Gutter Cheek — The vertical end of a gutter.

2.25 Gutter — Any form of roof water channel.

2.25.1 Box Gutter — A gutter with parallel sides.

2.25.2 Eaves Gutter — A gutter fixed at the eaves.

2.25.3 Secret Gutter — A gutter formed at a valley or against an abutment and practically hidden from view, the slates or tiles leaving only about 25 mm of the gutter visible.

2.25.4 Side Gutter — A gutter formed against an abutment and exposed to view.

2.25.5 Valley Gutter — A gutter formed at a valley, having sloping sides and exposed to view.

2.26 Hip — The outer angle (more than 180°) formed by the inclined ridge between two intersecting roof slopes.

2.27 Hip Capping — A protective covering at a hip.

2.28 Hipped End — A roof surface, usually triangular, bonded by the hips at the sides and the eaves at the base.

2.29 Mansard — A roof with two pitches on each side of the ridge, the steeper commencing at the eaves and intersecting with a flatter pitch finishing at the ridge. The term is sometimes applied to a roof with steeply pitched slopes surmounted by a flat.

2.30 Mansard Curb — The line of junction between the two slopes of a mansard roof.

2.31 Pent Roof — A roof with slope on one side only.

2.32 Pitch

2.32.1 The angle of inclination with the horizontal of the rafters or substructure surface on which the roof coverings are laid.

2.32.2 In patent glazing, the angle at which the plane of a stretch of glazing is inclined to the horizontal.

2.33 Pitched Roof — A roof the pitch of which is greater than 10° to the horizontal.

2.34 Ridge — The horizontal inter-section of the two rising roof surfaces inclined in opposite directions.

2.35 Ridge Capping — A protective covering at a ridge.

2.36 Saucer Dome — A glass or plastics dome made in one piece.

2.37 Skirting (Upstand) — The portion of roof covering turned up against a vertical surface (but not necessarily tucked into a groove).

2.38 Skylight Opening — A framed glazed aperture in a roof surface.

2.39 Snow Cradling — See 2.40.

2.40 Snowboards — Longitudinal battens fixed to cross bearers and placed in a gutter to facilitate the draining away of melting snow.

2.41 Snowguards — Low railings or other suitable fittings fixed at the lower ends of sloping roofs to prevent snow from slipping off.

2.42 Soffit Board — A member, usually of timber, fixed to the underside of rafters, forming projecting eaves.

2.43 Stepped Skirting — A skirting on an inclined inter-section when the top edge is stepped from course to course of brickwork.

2.44 Stopend — The closed end of a gutter or ridge capping (sometimes purpose-made).

2.45 Top Edge — The upper edge of a roof surface finishing at a ridge or against a part of a structure which rises above the roof surface.

2.46 Underlay — A layer of material used to isolate the roof covering from the sub-structure.

2.47 Valley — The re-entrant angle formed by the inter-section of two inclined roof surfaces.

2.48 Vapour Barrier — Roofing felt or other impervious material, laid below roof insulation to prevent transmission of moisture into the insulation.

2.49 Verge — The edge of the roof surface finished at a gable or the edge of the vertical tiling at window reveals and of walls and dormer cheeks.

2.50 Walkway — A permanent gangway or platform to provide safe access along a length of roofing.

2.51 Wind Filling — Brickwork that is carried between the rafter and the underside of the roof.

SECTION 2 ASPHALT

2.52 Apron — Asphalt applied vertically to the fascia or overhang of a roof.

2.53 Asphalt — A natural or artificial mixture in which bitumen is associated with inert mineral matter. The word 'asphalt' should always be qualified by indication of its origin or nature.

2.54 Bay — The width of asphalt laid between gauges to give the asphalter control over laying.

2.55 Bitumen — A non-crystalline solid or viscous material, having adhesive properties, derived from petroleum either by natural or refinery processes and substantially soluble in carbon disulphide (*see also* IS : 334-1965*).

2.56 Blocks — Mastic asphalt cast in moulds in sizes convenient for handling.

2.57 Boss or Bossing — An asphalt covering of a small projection.

2.58 Bullnosed Edge — The rounded edge to asphalt which finishes at a metal flashing, such as at eaves.

2.59 Check Fillet (Water Check) — A kerb formed on a roof surface to control water, formed of or covered by asphalt.

2.60 Coat — A single layer of asphalt.

2.61 Collar — A formation of asphalt around a pipe or other projection through a roof, ensuring a watertight joint.

*Glossary of terms relating to bitumen and tar.

2.62 Drip — The undercut edge of an asphalt apron.

2.63 Eaves Flashing — A metal strip with a welted edge or a reinforced felt strip dressed into an eaves gutter.

2.64 Fillet — An asphalt seal formed at internal angles as an independent operation.

2.65 Gauges — Wooden or metal strips temporarily fixed to assist the asphalter in spreading the asphalt to the required contour and thickness.

2.66 Isolating Membrane — Black sheathing felt or other suitable material used to isolate a mastic asphalt covering from the roof structure.

2.67 Lap — The extent by which the abutting edges in successive coats of asphalt are staggered.

2.68 Nib — The portion of the top edge of vertical asphalt which is tucked into a chase.

2.69 Reservoir Roof — A roof area constructed to retain water to a specified depth.

2.70 Sheathing Felt (Black or Brown) — A special type of impregnated flaxible felt used as an underlay for mastic asphalt.

SECTION 3 CORRUGATED SHEETS

2.71 Accessories — Purpose-made fittings, such as apron flashing pieces, barge boards, bottom glazing flashing, corner piece (corner flashing), eaves filler pieces, expansion joints, hip capping, hip tile or cap, ridge capping, ridge finials, roof lights, ventilators, with which the roof is furnished.

2.72 Barge Board (Gable Trim) — A purpose-made fitting, normally of angular section, to form the junction between roof covering and either wall or vertical cladding at a gable end. (see 2.2 in Section 1).

2.73 Bottom Glazing Flashing — An accessory used below roof glazing stretches and providing a shelf to receive a flexible flashing.

2.74 Corner Piece (Corner Flashing) — An accessory to form the junction between vertical corrugated sheeting at internal or external angles.

2.75 Corrugated Sheets — Sheets formed with a series of regularly spaced corrugations running lengthwise. They are made of aluminium, asbestos-cement, galvanized steel, glass, plastics, protected metal or zinc.

2.76 Cover Soaker — A flashing unit to form a weather-resisting junction between roof sheet and the base of a roof ventilator.

2.77 Cover Width — The amount of a sheet exposed on the outside of a roof.

2.78 Cranked Sheet — A sheet used to form the junction of two varying roof pitches.

2.79 Crown Course — A curved or cranked sheet used as an alternative to ridge capping at the roof apex.

2.80 Curved End Sheet — A sheet with a short length at the end curved to a defined radius. Also termed 'cramped sheet' in metal roofing.

2.81 Daylight Width — The unobstructed width of translucent sheet through which light is admitted.

2.82 Double-Skin Roof Covering — A roof covering combining a corrugated exterior covering with an inner flat ceiling sheet.

2.83 Eaves Filler Piece (Eaves Closure Piece) — An accessory used to fill or close the corrugation spaces under the roof sheeting at the eaves and above patent glazing stretches.

2.84 Eaves Filler and Flashing Piece — A unit similar to the eaves filler or closure piece but incorporating a drip.

2.85 Finial or Ridge End — An accessory used to form a weatherproof covering at the end of a ridge.

2.86 Overall Width — The whole width of the roof sheeting.

2.87 Ridge Capping — A fitting which, in asbestos-cement, is usually in two adjustable halves to cover the ridge of various angles of pitched roofs (*see also* 2.35).

2.88 Ridge Filler — An accessory used to fill or close the corrugation spaces under the ridge capping or cover (sometimes part of the ridge component).

2.89 Rooflight Sheets

2.89.1 Deadlight Sheets — A corrugated sheet having a rectangular opening in the centre for fixed glazing.

2.89.2 Opening Light — A corrugated sheet rooflight with opening frame.

2.90 Skew Eaves Filler Piece — An accessory for closing corrugations of sheets at raking eaves.

2.91 Terminal Sheet — A metal sheet of special width used at the extreme ends of roofs.

SECTION 4 FLEXIBLE SHEETS

2.92 Anchor Strip — A strip of thermoplastic laminated sheet used as a lining plate; it is bent at right angles with one edge fixed on the structure and used to secure the vertical covering at the eaves.

2.93 Apron Eaves Piece (also known as a 'T' Plate) — A 'T' shaped section formed by bending and folding zinc sheet which is secured to the roof structure; function is to secure the eaves edges of zinc roof sheets and also to act as a flashing.

2.94 Bale Tack — A type of fixing in which the edge of the lead sheet to be secured is cut, leaving an offset the width of a lead tack (see 'tack') which is folded with the tack.

2.95 Bay — A unit of sheet covering as laid between rolls, standing seams or drips.

2.96 Bead — A tubular or semi-circular section along the lower edge of sheets at drip and eaves, providing a means of fixing and stiffening the edge of the sheet.

2.97 Capillary Groove

2.97.1 A horizontal groove in a vertical face into which the lead undercloak is dressed.

2.97.2 A groove cut into a wooden ridge at a lap into which the undercloak is dressed.

2.98 Capping — A strip of sheet covering a roll, which may be welted to the edges of the roof sheets or fixed as an independent unit.

2.99 Clink — See 2.142.

2.100 Clip (or 'Tie') — A metal strip shaped for the purpose of securing the roof sheeting.

2.101 Copper Nailing — A method of fixing lead sheet, usually on a vertical face, with copper nails near the edge. Termed close copper nailing if nails are at 25 mm or 50 mm intervals; open copper nailing if at 75 mm or 100 mm intervals.

2.102 Corner Piece — A piece of zinc sheet which is welted on to zinc roof sheets or box gutter linings where drips abut against upright surfaces.

2.103 Cramped Sheet — *See* 2.80.

2.104 Dog-ear — A box-like corner of three dimensions formed by folding a flat metal sheet without cutting.

2.105 Drip — A step formed in a flat roof or gutter across the direction of fall.

2.106 Drop Apron — A narrow piece of flexible roofing sheet fixed vertically at eaves and gutters.

2.107 Feint (or 'Set') — Slightly bent free edge of zinc sheet cappings, flashings, etc, to form anti-capillary joints.

2.108 Gauge — The customary term for describing the thickness of nails and metals.

2.109 Gusset Piece — The piece of sheet which is soldered or welded over an external corner formed between a roof sheet and two intersecting upright surfaces.

2.110 Half-Stop — The junction of the head (or welt) at the eaves or at a drip, and the side turn-up against a roll at the lower corner of a zinc roofing sheet.

2.111 Holding Down Clip — A metal clip of suitable section for securing and joining successive lengths of capping.

2.112 Hollow Roll — A method of jointing two adjacent pieces of lead in the direction of the fall on a flat, pitched or curved surface, the two edges being laid together and worked over to form a cylindrical roll.

2.113 Inodorous Felt — A type of felt used as an underlay to metal roof coverings.

2.114 Italianized Zinc Sheet — A flat zinc sheet in which are formed at regular intervals three or more equally spaced lengthwise ribs of half round section.

2.115 Laps (or Passings) — The distance which sheets lap over adjoining pieces in gutters, flashings, ridge coverings, etc.

2.116 Lead Slate — The flashing where a pipe passes through a pitched roof covering, comprising a base to course in with the roof covering and an upstand to fit close round pipe. This flashing may also be made of other materials.

2.117 Lead Sleeve — The flashing where a pipe passes through a flat roof covering.

NOTE — This flashing may also be made with other materials.

2.118 Lead Tack — *See* 2.134.

2.119 Lead Wedge — *See* 2.141.

2.120 Lining Plate — Strips of metal fixed to eaves or verge to secure the free edge of the roof covering.

2.121 Lock Joint — *See* 2.142.

2.122 Overcloak — That part of the upper sheet of metal overlapping the lower at a drip, roll, seam or welt.

2.123 Patina — The thin, stable film of oxide or other metallic compounds which forms on metal surfaces on exposure to air.

2.124 Pig Lug — *See* 2.104.

2.125 Pitch of Nailing — The spacing apart of nails in any row.

2.126 Roll — A shaped core against the sides of which the roof coverings are dressed or are turned up. Batten roll, conical roll, ridge roll, round tapped roll and square roll are variations of the above.

2.127 Saddle Piece — A piece of flexible roofing sheet or capping shaped over a roll to form a watertight junction between the end of the roll and an abutment.

2.128 Secret Tack — A method of fixing dormer cheeks, a lead tack being soldered or lead-burned to the back of the lead sheet, passed through a slot cut in the boarding and secured on the inside.

2.129 Solid Rolls — A method of jointing two adjacent pieces of lead, where the edge of one sheet is dressed over a wood roll, the other sheet being dressed over to cover it.

2.130 Splash Lap — That part of the lead overcloak of a drip or roll that extends on to the flat surface of the adjoining sheet lead.

2.131 Staggering — The staggering of cross joints to avoid the difficulty of welting too many thicknesses of metal into a standing seam or over a conical roll.

2.132 Standing Seam — The joint formed by turning up the edges of two adjacent sheets perpendicular to the surface and welting them together.

2.133 Stopends — The forming of the lower ends of cappings above drips, gutters and the like, to form a closure.

2.134 Tack, Lead or Other Metal — A strip used to secure any free edge of the flashing and coverings, and also to secure rolls and welts. One end of a tack is fixed to the structure and the other is folded over the free edge of the metal sheet (*see* 2.100).

2.135 Tag — Copper strip double-folded and used as a wedge for holding sheet in masonry joints.

2.136 Temper, Dead Soft — A condition and necessary degree of hardness of the copper used for roofing purposes.

2.137 Tie — See 2.100.

2.138 Torus Roll — A wooden roll covered with lead sheet at the intersection formed by the change in pitch of a mansard roof.

2.139 Undercloak — The part of the lower sheet overlapped by the upper at a drip, roll, seam or welt.

2.140 Weight of Lead — The substance of lead sheet, which is commonly described by its weight per square meter.

2.141 Wedge Lead — A tapered piece made either by casting or by beating folded pieces of lead used to secure flashings to masonry walls.

2.142 Welt (or 'Clink') — A method of joining by folding over the edges of metal sheets, engaging the folded portions and dressing down flat. Either single or double folds may be made, the completed joint being termed a single, or double welt respectively.

2.143 Welted Nosing — Formed where a horizontal surface adjoins a vertical surface. The edges of the horizontal and vertical sheets being folded and dressed down at the top of the vertical surface. May also be used at the angle of two vertical faces.

2.144 Welting Strip — A strip of metal with one edge secured to the structure and the other edge folded to engage the lower edges of dormer cheeks or other vertical coverings to hold them in position.

2.145 Bonding Compound — An oxidized bitumen, melted and applied hot, or other suitable bituminous compound for fixing the first layer of the felt to the sub-structure and subsequent layers of felt together.

2.146 Built-up Roofing — Two or more layers of roofing felt laid to break joint and fixed together with bonding compound.

2.147 Cap Sheet — The top layer of mineral surfaced bitumen felt when employed in built-up roofings.

2.148 Clout Nails — Nails with large flat heads for fixing felt.

2.149 Dressing Compound — Any bituminous or other material used hot or cold for top dressing the exposed surface of the roofing felt.

2.150 Drip — A strip of roofing felt or metal fixed under or between the layers of the roof covering at eaves or verges and turned down.

2.151 Flush Finish — The trimming of roofing felt to eaves or verge where a drip is not required.

2.152 Hip Capping — An additional strip of roofing felt fixed as a protective finish to the hip.

2.153 Lapped Joint — A joint formed by overlapping adjoining widths of felt by about 50 or 75 mm.

2.154 Layer — A single thickness of roofing felt.

2.155 Primer — A bitumen solution of suitable viscosity applied where necessary to ensure adhesion of the bonding compound to the sub-structure.

2.156 Retaining Kerb — A kerb, usually of metal, fixed at eaves of verges of roofs to act as a stop for the surfacing.

2.157 Roofing Felt — A sheet of matted fibres rendered partially or completely impervious to water by treatment with bituminous materials.

2.158 Sealing Compound — A liquid or semi-liquid bitumen applied cold, used for sealing the laps of felt in single layer work (also known as lap cement).

2.159 Strip Slates — Units of mineral-surfaced bitumen felt shaped to resemble two or more slates side by side so that when laid they act in a manner similar to shingles, slates or tiles.

2.160 Surfacing — A protective covering, such as gravel, tiles or macadam applied on top of the built-up roofing.

2.161 Taping Strip — A strip of saturated felt or similar material laid over the open joints between unit slabs in a roof (not intended to be grouted or screeded) prior to the bonding of the roofing felt over the whole area.

2.162 Tuck-in — That portion of the roofing felt, skirting or cover flashing tucked into a chase.

2.163 Turn Up — See 2.37.

2.164 Water Check — A kerb, raised above the roof surface and covered by the built-up roofing, to control rain-water.

2.165 Weltd Drip — A finish at eaves or verges formed by a strip of roofing felt folded back to return on the roof.

SECTION 5 PATENT GLAZING

2.166 Access Panel — A glazed metal frame hinged to open outwards and fitted with a locking device and fixed between patent glazing bars to provide access.

2.167 Barrel Light — A rooflight, curved in cross-section, formed with curved glazing bars and glass.

2.168 Break — The interruption between successive tiers of patent glazing.

2.169 Capping — A separate metal section fixed externally to certain types of patent glazing bar to secure the glass, afford protection to the stem of the bar and check weather penetration.

2.170 Condensation Washer — A shaped fitting to raise the lower end of a glazing bar above a purlin and to allow the escape of condensation moisture.

2.171 Conical Light — A rooflight in which the glazing is sprung from a circular base to an apex but in which the glazing bars and glass are straight.

2.172 Cushion — A continuous seating for the glass provided along the full length of the glazing bar, usually by means of an asbestos or plastics cord or ductile metallic bead.

2.173 Cut-out — The part of a patent glazing bar (usually at the to end) which is shaped to facilitate the flashing of the glazing.

2.174 Double Glazing — A system of glazing incorporating two layers of glass separated by a still-air space to provide insulation.

2.175 Double Hole Fixing — A system in which each patent glazing bar is fixed to the roof member by means of two bolts or screws at the top and two at the bottom.

2.176 Draught Fillet (Windguard) — A filler piece between the underside of the glass and the bottom glazing purlin or plate.

2.177 Fixing Bracket — A fitting securing the glazing bar to the supporting member.

2.178 Glass Stop — A fitting secured to the lower end of a patent glazing bar to prevent panes from sliding down. The lower end of the glazing bar is sometimes shaped to serve the same purpose.

2.179 Joggled Bar — A patent glazing bar cranked to accommodate overlapping panes of glass.

2.180 Kick or Set — A term used to denote the difference which usually occurs between the pitch or slope of patent glazing and that of the surrounding roof covering.

2.181 Lap — The distance by which successive tiers of glazing lap one over the other.

2.182 Lead Wing — A projecting lead fin which is dressed down on to the glass for the purpose of securing it and acting as a check against weather penetration.

2.183 Overhang — The projection of the glass beyond the lower supporting roof member.

2.184 Patent Glazing — A generic term applied to all systems of dry or puttyless glazing.

2.185 Patent Glazing Bar — A glazing bar of special type and profile designed for dry glazing, that is, without the use of putty, mastic or like substances. Alternative prefixes are used to refer to different specific types in the following manner.

2.185.1 Aluminium — To denote a bar of extruded aluminium alloy.

2.185.2 Galvanized (Steel) — To denote a steel bar galvanized after fabrication.

2.186 Pyramidal Light — A rooflight in which the glazing is sprung from a base formed in the shape of a regular polygon to an apex.

2.187 Run — *See 2.198.*

2.188 Seating — *See 2.172.*

2.189 Set — *See 2.180.*

2.190 Shoe — A fitting normally of non-ferrous metal acting as a glass stop and at the same time securing the end of the bar to the structural member.

2.191 Single Hole Fixing — A system in which each patent glazing bar is fixed to the roof members by means of single bolts or screws at top and bottom.

2.192 Span — The distance between the points of support of the glazing bar.

2.193 Splay — *See 2.173.*

2.194 Square of Glass — A piece of glass, of any shape, cut to size ready for glazing.

2.195 Step — *See 2.168.*

2.196 Stile End — The junction between the end bar of a stretch of patent glazing and the adjoining roof covering. The term is often used in connection with the flashing used at this point.

2.197 Storm Clip — A saddle-shaped clip applied to the exterior of a glazing bar to prevent outward movement of the glass.

2.198 Stretch — An area of patent glazing usually expressed by the two linear dimensions (a) length measured along the roof and (b) depth, that is, distance between the top and bottom extremities of the glass. The product of these dimensions is also usually given in terms of superficial meters. In cases where a 'Break' (see 2.168) occurs, the area above and below the break are treated as separate stretches and are then often referred to as tiers.

2.199 Water and Condensation Channels — Grooves provided in the patent glazing bar to drain away water.

2.200 Windguard — See 2.176.

SECTION 6 SHINGLES, SLATES AND TILES

2.201 Asbestos-cement Slates — Roofing units, similar to slates, which are composed of asbestos fibre and Portland cement.

2.202 Battens — Horizontal timber members of small section on which shingles, slates or tiles may be laid. They are sometimes termed tile or slate battens, or tile or slate laths.

2.202.1 Counter Battens — Timber members fixed at right angles, or obliquely, to the direction of the battens between them and the surface below.

2.202.2 Open Battens — Battens fixed direct to rafters or studdings at suitable centres to receive the roof covering.

2.203 Bedding — The laying of tiles or slates in position with mortar.

2.204 Bond — The placing of slates or tiles so that the joint between two slates or tiles in one course is at or near the centre of the slate or tile of the course below.

2.205 Butt — The thick end of a tapered shingle generally fixed toward the bottom of the slope.

2.206 Centre Nailing — Nailing slates along a line slightly above the head of the slate in the course below.

2.207 Cheek Nailing (Check Nailing) — A method of double nailing whereby a hole is pierced near one side of the slate and a notch cut in the other side.

2.208 Centre Piece — The cover piece applied at the junction of ridge capping shingles laid from either end where they meet at the centre.

2.209 Course — A row of slates, tiles or shingles laid in the same lateral plane so that the tails or butts of adjoining slates, tiles or shingles are in alignment.

2.210 Cuttings — Slates, tiles or shingles cut as necessary when bonding or meeting at hips, valley or abutments.

2.211 Diminishing Courses — Slating in graduated courses, the gauge diminishing from eaves to ridge.

2.212 Double Course at Eaves — Two thicknesses of slates or shingles at the eaves, the under course being of sufficient length to obtain the correct lap.

2.213 Eaves Course — A course of special tiles or slates laid at the eaves, of sufficient length to obtain the correct lap.

2.214 Fair End of Ridge — The finish at the end of a ridge.

2.215 Fitted End — The end of a hip or ridge capping fitted at an abutment.

2.216 Galleting (Tile Laminations) — Small rectangular pieces of plain tile bedded in the top course of single-lap tiles to provide a level bedding surface for the ridge tiles; also used at hips.

2.217 Gauge — The exposed length of a slate, tile or shingle when laid on the roof.

2.218 Glass Tiles and Slates — Pieces of glass of the same shape and size as the tiles or slates, which course and bond in with them and are used in a roof to give light in the space under the roof.

2.219 Grillage — A metal framework used as a substitute for battening, the horizontal bars being gauged to suit the tiles or slates to be fixed.

2.220 Head Nailing

2.220.1 A method of fixing slates by nailing approximately 25 mm from the head of the slate.

2.220.2 The nailing of oak shingles through the upper portion so that the nails do not have to pass through the lower courses.

2.221 Hip Capping (Shingles) — A method of capping over the joint between the shingled surfaces of intersecting faces of roof by fitting a series of narrow shingles along the line of the hip, these being laced or woven together at the angle, each alternate course lapping the shingles on the other side in opposite direction.

2.222 Hip Hook, Hip Iron — A metal strap bent to form a stop for the hip covering and screwed to the lower end of hip rafter.

2.223 Hip, Mitred

2.223.1 A hip finishing in shingles, slates or tiles which are close cut and mitred down the line of the hip and usually laid with soakers.

2.223.2 Shingles with edges bevelled to mitre and fit closely together at the inter-section of steep slopes, as on spires.

2.224 Holing — The operation of piercing holes in slates prior to nailing them in position.

2.225 Lap — The distance by which the shingle or tile overlaps and adjacent shingle on tile. When measured, course over course, it will be termed as 'end lap' and when measured edge over edge of the shingle, it will be termed as 'side lap'.

2.226 Margin — *See 2.217.*

2.227 Nibs — Projecting lugs on the underside, at or near the head of a tile is supported on the batten.

2.228 Pegs — Shaped pieces of oak or other hardwood used in fixing shingles, slates or tiles.

2.229 Ribbon — Occasional courses of ornamental slating or tiling.

2.230 Ribbon Courses — Succeeding courses laid to alternatively greater and lesser exposures.

2.231 Ridge Straps — Metal strips shaped to fit over zinc ridge capping.

2.232 Saddle — A piece of sheet metal dressed to shape, inserted under the roof covering as a weather protection at vulnerable points.

2.233 Sarking — A term sometimes used for a layer of insulating material under the main roof covering.

2.234 Sarking Felt — A special type of impregnated flax felt for lining roofs under slates and tiles.

2.235 Shingle — This flat tapering rectangular piece of wood used as a roof tile.

2.236 Shingling — The fixing of shingles as a final roof covering shall be as given below.

2.236.1 Angles — The weaving together of alternate courses of shingles, each alternate course lapping and weathering the shingles on the opposite face at internal and external angles.

2.236.2 Double Coursing — A method of fixing shingles in a succession of double courses, generally in a vertical plane, in each of which the joints are broken to provide a weathering, allowing double the normal exposure to be given. The face course is fixed half an inch lower than the backing course to provide a drip and a deeper shadow line.

2.236.3 Random Width Shingling—Shingling with shingles of uniform length but varying widths.

2.236.4 Staggered Courses — Shingles laid, with alternate shingles laid above or below the normal exposure line or pattern.

2.236.5 Straight Courses — Shingles laid with their butts in straight line.

2.236.6 Strip Soaker — A strip of thin impervious material laid between each course of shingles on swept work.

2.236.7 Weather Shingling (Hanging Shingling) (Vertical Shingling) — Shingling fixed to vertical or nearly vertical surfaces.

2.237 Shouldering — In tiling. The splay at the top right-hand and bottom left-hand corners of a single lap tile.

2.238 Side Lap — The distance by which the side of a slate, tile or shingle overlaps the joint in the course below.

2.239 Slates — Pieces of true slate rock or other laminated stone, split and dressed for use as roof coverings.

2.239.1 Back of Slate — The upper surface of a slate as normally laid with chamfers uppermost.

2.239.2 Bed of Slate — The under surface of a slate when laid.

2.239.3 Fillet of Slate — Slates cut and fitted to form a fillet as an alternative to flashings.

2.239.4 Head of Slate — The upper edge of a slate when laid.

2.239.5 Tail of Slate — The lower edge of a slate when laid.

2.240 Slating — The fixing of slates as a final roof covering.

2.240.1 Diagonal Slating — A method of laying asbestos-cement slates diagonally on a roof.

2.240.2 Open Slating — Slating with a space between the edges of adjacent slates in the same course.

2.240.3 Ornamental Slating — Slating in which the exposed portions of all or some of the slates are cut to shape.

2.240.4 Random Slating — Slating in graduated courses with slates of varying lengths and widths, the margin diminishing from eaves to ridge.

2.240.5 Random Width Slating — Slating with slates of uniform length but varying widths.

2.240.6 Scantle Slating — A cornish method of slating employing slates of small random sizes.

2.240.7 Sized Slating — Slating with slates of uniform length and widths.

2.240.8 Weather Slating (Hanging Slating) (Vertical Slating) — Slating fixed to vertical or nearly vertical or nearly vertical surfaces.

2.241 Soakers — Flexible members, usually of metal, lapped with slates, shingles or tiles and bent to form a watertight joint.

2.242 Tiering — See 2.250.

2.243 Tile Fillet — A fillet or reeper fixed over the rafter on shorter side as to provide an extra rise to the lower most corner of the tile and bring its slope in conformity with the general pitch of the roof. Sometimes the top edge of the eaves board may itself be made to serve the function of the tiling fillet.

2.244 Tile Listing — Tiles used to form a splayed fillet at abutments.

2.245 Tiles — Shaped pieces of fired clay, moulded concrete or other suitable artificial material for use as roof coverings (see IS: 654-1962* and IS: 1464-1959†).

2.246 Tiling — The fixing of tiles as a final roof covering.

2.246.1 Ornamental Tiling — Tiling in which the exposed portion of the tiles are made to an ornamental shape.

2.246.2 Vertical Tiling (Tile Hanging) (Weather Tiling) — Tiling fixed to vertical or nearly vertical surfaces.

2.247 Tilting Piece — A fillet, usually of wood, used at eaves or at open valley gutters to support the roof covering in the correct position relative to the roof surface.

2.248 Tingles — Strips of non-ferrous metal about 12 mm wide used in repairing slate covered roofs to support replacement slates that can not be nailed in place.

2.249 Tip — The thin end of a tapered shingle generally fixed towards the ridge.

*Specification for clay roofing tiles, Mangalore pattern (revised).

†Specification for ridge and ceiling tiles.

2.250 Torching — The mortar-pointing to the head and/or the side joints on the underside of the tiles or slates.

2.251 Undercloak

2.251.1 A course of tiles or slates on which the slate or tiling at a verge is bedded.

2.251.2 A row of shingles laid at 90° to the usual direction with their butts laid to a line overhanging the gable and over which the roof shingles are to be laid. This provides a greater thickness at the verge with a slight tilt.

2.252 Underslating Felt — Any bituminous felt used for lining a roof under slates or tiles.

2.253 Valley — See 2.47.

2.253.1 Laced Valley — A valley in which the courses are not horizontal, each course being swept up to a tile-and-a-half or slate-and-a-half laid aslant on a wide board in the valley.

2.253.2 Mitred Valley — A valley at which the shingles, slates or tiles of each course are close cut and mitred down the line of the valley and laid with soakers.

2.253.3 Open Valley — A valley between surfaces on which shingling slates or tiles are laid so that the valley material is visible in the space between them.

2.253.4 Swept Valley — A valley in which shingles, slates or tiles, made or cut to a taper sweep around the horizontal course.

2.253.5 Tapered Valley — The space between the shingling, slating or tiling at a valley arranged to be wider at the bottom than the top in order to facilitate the downward path of any debris which might otherwise collect.

2.253.6 Tiled Valley — A valley in which purpose-made valley tiles are used.

2.254 Verge Fillet — A prepared fillet or batten nailed into the end of the roof battens, covering the top edge of the gable walling and providing a neat finish over which the verge shingles overhang.

2.255 Weaving — The laying together of shingle courses on two adjoining surfaces, the shingles on opposite faces being lapped over the other alternately and providing a weathered angle horizontally, vertically or obliquely, as in ridges, angles or hips.

SECTION 7 THATCH

2.256 Bamboo Strips — Long, thin rods cut out of bamboo and fixed on top and bottom of thatch for securing the same to rafters.

2.257 Bed — The strip of thatch, the width of a ladder, extending from ridge to eaves, laid as work proceeds.

2.258 Flaking — A mat of woven reed fixed on top of the rafters as a foundation for thatching in place of battens or boarding.

2.259 Thatch — A roof covering of reed or straw.

(Continued from page 1)

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²

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